



The Automated Geospatial Watershed Assessment Tool

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ARS/137460

Announcement of Availability



The Automated Geospatial Watershed Assessment (AGWA) tool has been developed under an interagency research agreement between the U.S. Environmental Protection Agency, Office of Research and Development and the U.S. Department of Agriculture, Agricultural Research Service. AGWA is an assessment tool that uses widely available data to run two hydrologic models (KINEROS2 and SWAT). It was designed to be easily applied by managers and scientists to evaluate likely outcomes of management scenarios and rank different areas in a watershed in terms of likely consequences to change. It was also designed to perform watershed analyses over large areas such as entire basins and to evaluate problem areas at the subwatershed scale to include small communities or rural areas. AGWA has been tested in a wide variety of watersheds, ranging from the deserts of southeast Arizona to the forested hills of upstate New York.

AGWA runs on a standard personal computer with minimum system requirements of a 300 MHz processor, 128 MB RAM, 50 MB of storage, and ArcView 3.x software. It requires GIS data that are easily acquired and available free of charge throughout the United States. AGWA and its associated datafiles and documentation are available for download from our websites (listed below). Anyone with a modem can download land cover, soils, and topographic data needed to run AGWA.

AGWA 1.5 includes several new features: multiple outlet watershed discretization, parameterization and simulation; KINEROS riparian buffer simulation; SWAT hydrologic response units and water quality simulation; and nested watershed discretization. The core functionality has also been improved for more robust handling of watershed discretization and parameterization.

ArcGIS 9x and Internet versions of AGWA are currently under development. AGWA2 and dotAGWA are scheduled for release in mid 2007.

Additionally, AGWA has been successfully peer-reviewed by both the EPA and ARS protocols and is supported by technical manuals and a quality assurance/quality control report available via the websites.

For more information, visit our websites at:

<http://www.epa.gov/nerlesd1/land-sci/agwa/index.htm>

<http://www.tucson.ars.ag.gov/agwa>

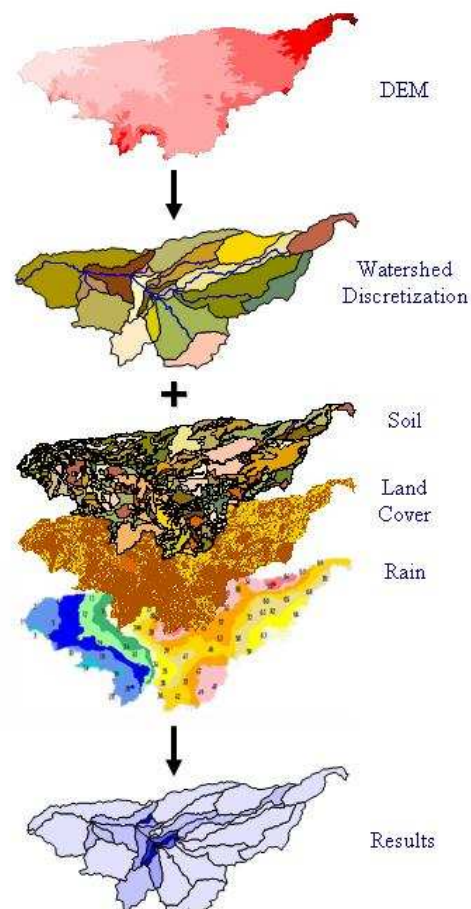
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KINEROS	SWAT
Infiltration (mm, m ³ /km)	Precipitation (mm)
Infiltration (in, ac-ft/mi)	ET (mm)
Runoff (mm, m ³)	Percolation (mm)
Peak flow (m ³ /s, mm/hr)	Surface runoff (mm)
Sediment yield (kg/ha)	Transmission loss (mm)
Channel scour (mm/m ²)	Water yield (mm)
Sediment discharge (kg/s)	Sediment yield (t/ha)